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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/928,962	08/13/2001	Shamim A. Alpha	27252.4	8752

7590

10/03/2003

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EXAMINER

VEILLARD, JACQUES

ART UNIT

PAPER NUMBER

2175

DATE MAILED: 10/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/928,962

Applicant(s)

ALPHA, SHAMIM A.

Examiner

Jacques Veillard

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☒ Claim(s) 25 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is responsive to the Applicant's amendment filed on 07/10/2003.
2. Claims 1-25 are presented for examination.
3. Claims 1, 9, 15, and 20 are the independent claims. Other claims are the dependent.

Response to Arguments

4. Applicant's arguments on 7/10/2003 with respect to claims 1-25 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
6. Claims 1, 5, 7-10, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chakrabarti. et al.(U. S. Pat. No. 6,418,433, hereinafter Chakrabarti) in view of Schuetze et al.(U. S. Pat. No.6,567,797, hereinafter Schuetze).

As per claim 1, Chakrabarti teaches a web crawler method learns to recognize web pages that are relevant to the interest of one or more users (See the Title and the abstract). Similarly Chakrabarti's method determines a relevance rank for each of a plurality of pages identified by a search query (See col.2, lines 56-60), and comprising the steps of: determining a content-based relevance rank for each of the pages based on a content of each page (See col.3, lines 6-12).

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Chakrabarti does not explicitly teach the method for adjusting the content-based relevance rank of each page based on a link structure of the pages including link rank values from in-coming links.

Schuetze teaches a recommendation system capable of providing document recommendations to a user based on various users' information browsing and retrieval histories (See col.1, lines 29-32) including similarly the feature of adjusting the content-based relevance rank of each page based on a link structure of the pages including link rank values from in-coming links (See col.10, lines 40-67 to col.11, lines 1-11). These passages of Schuetze show the adjustment of the content of a document based on inlinks and outlinks.

It would have been obvious to a person for ordinary skill in the art at the time of the applicant's invention to modify the teachings of Chakrabarti with the teachings of Schuetze because Schuetze provides a system wherein users can adjust content of documents based on the complexity of the document and track individuals information access habits by way of the characteristics of the documents those users access (See col.5, lines 33-37).

As per claims 5 and 7, the combination of Chakrabarti and Schuetze, as modified, teaches the claimed invention limitations, wherein the adjusting the relevance rank step includes combining the relevance rank of a page with the link rank values of all in-coming links to the page (See Schuetze's col.10, lines 40-67 to col.11, lines 1-11). These passages of Schuetze show the adjustment of the content of a document based on inlinks and outlinks.

As per claim 8, the combination of Chakrabarti and Schuetze, as modified, teaches the claimed invention limitations, further including identifying a candidate set of pages in response to the search query (See Chakrabarti's col.5, lines 22-25, and col.6, lines 35-41).

As per claim 9, the claim has substantially the same limitation as claim 1. These limitations are already been discussed on the rejection of claim 1 above. Therefore, it's rejected on similar grounds corresponding to the arguments given for rejected claim 1.

As per claim 10, the combination of Chakrabarti and Schuetze, as modified, teaches the claimed invention limitations, further including link structure logic for obtaining a link structure of the candidate set of pages to determine in-coming and out-going page links (See Chakrabarti's col.6, lines 21-39, and col.10, lines 35-43).

As per claim 14, the combination of Chakrabarti and Schuetze, as modified, teaches the claimed invention limitations, further including an information retrieval system for identifying the candidate set of pages from a network in response to the search query (See Chakrabarti's col.5, lines 22-25, and col.6, lines 49-51).

7. Claims 2, 3, 4, 6, 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chakrabarti.(U. S. Pat. No. 6,418,433) and Schuetze (U. S. Pat. No.6,567,797) as applied to claims 1 and 9, and further, in view of Candan et al.(U. S. Pat. No.6,549,896, hereinafter Candan).

As per claims 2 and 12, the combination of Chakrabarti and Schuetze, as modified, does not teach the claimed invention, wherein the content-based relevance rank for each page is

determined from a probability value that a user will be on the page in relation to other pages of the identified pages.

Candan teaches a method for estimating an association between the media object and the seed web page accessed by a user (See the abstract, and col.4, line 63 through col.5, line 6) including similarly the features, wherein the content-based relevance rank for each page is determined from a probability value that a user will be on the page in relation to other pages of the identified pages (See col.16, lines 35-39).

It would have been obvious to a person for ordinary skill in the art at the time of the applicant's invention to modify the combination's teachings of Chakrabarti and Schuetze with the teachings of Candan because Candan provides a system wherein a pre-fetched object utilization can be captured by an object visualization probability and subjecting an end-user's stickiness meaning the time that the end-user spends viewing the page.

As per claims 3, 4, and 13, the combination of Chakrabarti, Schuetze and Candan, as modified, teaches the claimed invention, further including determining the link rank value for each out-going link from an associated page based (See Chakrabarti's col.7, lines 52-65) on a probability of leaving the associated page (See Candan's col.16, lines 41-47). The time spent by the user for viewing the pages corresponds also to the same time he/she has to leave the pages.

As per claims 6 and 11, the combination of Chakrabarti, Schuetze and Candan, as modified, teaches the claimed invention, further including a probability logic for determining a staying probability for each page being a probability that a user will stay on a given page (See col.15, lines 60-62), and for determining a leaving probability for each page being a probability that a user will leave a given page (See Candan's col.14, lines 35-52).

8. Claims 15 -24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chakrabarti.(U. S. Pat. No. 6,418,433) in view of Schuetze (U. S. Pat. No.6,567,797) and Candan et al.(U. S. Pat. No.6,549,896, hereinafter Candan).

As per claim 15, Chakrabarti teaches a system wherein the relevance ranking for pages obtained from a network search query (See col.2, lines 56-60, and col.3, lines 53-56), the system comprising: link structure logic for obtaining a link structure of the pages which identifies out-going links (See col.3, lines 19-21) from each of the pages which become in-coming (See col.6, lines 16-22) links to other pages; a content analyzer for determining a content of each page (See Fig.1, components 28 and 28A, and col.10, lines 10-17); a content relevance ranking logic for determining a content relevance rank for each page based on a content of the page in relation to the network query (See col.3, lines 53-56, and col.6, lines 49-51); link analysis logic for determining a link ranking for each of the out going links for each of the pages (See col.10, lines 35-42).

Chakrabarti does not explicitly teach a relevance rank adjuster for determining and adjusting a relevance rank of a page by combining the content relevance rank with the link rankings associated to in-coming links for the page; and a link ranking representing a probability of leaving an associated page by the out-going link.

Schuetze teaches a recommendation system capable of providing document recommendations to a user based on various users' information browsing and retrieval histories (See col.1, lines 29-32) including similarly the feature of adjusting the content-based relevance rank of each page based on a link structure of the pages including link rank values from in-coming links (See col.10, lines 40-67 to col.11, lines 1-11). These passages of Schuetze show the adjustment of the content of a document based on inlinks and outlinks

It would have been obvious to a person for ordinary skill in the art at the time of the applicant's invention to modify the teachings of Chakrabarti with the teachings of Schuetze because Schuetze provides a system wherein users can adjust content of documents based on the complexity of the document and track individual's information access habits by way of the characteristics of the documents those users access (See col.5, lines 33-37)

The combination of Chakrabarti and Schuetze does not explicitly teach the link ranking representing a probability of leaving an associated page by the out-going link.

Candan teaches a method for estimating an association between the media object and the seed web page accessed by a user (See the abstract, and col.4, line 63 through col.5, line 6) including similarly the features, the link ranking representing a probability of leaving an associated page by the out-going link (See Candan's col.16, lines 41-47). The time spent by the user for viewing the pages corresponds also to the same time he/she has to leave the pages.

It would have been obvious to a person for ordinary skill in the art at the time of the applicant's invention to modify the combination's teachings of Chakrabarti and Schuetze with the teachings of Candan because Candan provides a system wherein a pre-fetched object utilization can be captured by an object visualization probability and subjecting an end-user's stickiness meaning the time that the end-user spends viewing the page.

As per claims 16 and 22, the combination of Chakrabarti, Schuetze and Candan, as modified, teaches the claimed invention limitations, wherein the relevance rank of each page is represented by a probability of a user being on the page in relation to all pages obtained from the search query (See Candan's col.16, lines 35-39). Candan achieved this limitations by showing the time the user spent to visualize a page.

As per claims 17, 18, and 21, the combination of Chakrabarti, Schuetze and Candan, as modified, teaches the claimed invention limitations, wherein the link analysis logic includes logic for determining a total probability of leaving a page and distributing the total probability of leaving the page to the out-going links of the page (See Candan's col.16, lines 41-47). The time spent by the user for viewing the pages corresponds also to the same time he/she has to leave the pages.

As per claim 19, the combination of Chakrabarti, Schuetze and Candan, as modified, teaches the claimed invention limitations, further including an information retrieval system for identifying a candidate set of pages from a network in response to the network search query (See Chakrabarti's col.2, lines 56-60, and col.3, lines 53-56).

As per claim 20, Chakrabarti teaches a similar method of ranking a set of candidate pages in response to a search query and identifying the candidate pages from a network that potentially match the search query (See col.3, lines 53-56). Chakrabarti does not explicitly teach adjusting the content-based relevance rank of each candidate page where the content-based relevance rank for a selected candidate page is influenced by a quantity and relevance of candidate pages that point to the selected candidate page; and assigning a content-based relevance rank to each candidate page based on a probability that a user will stay on a selected candidate page.

Schuetze teaches a recommendation system capable of providing document recommendations to a user based on various users' information browsing and retrieval histories (See col.1, lines 29-32) including similarly the feature of adjusting the content-based relevance rank of each candidate page where the content-based relevance rank for a selected candidate

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page is influenced by a quantity and relevance of candidate pages that point to the selected candidate page (See col.10, lines 40-67 to col.11, lines 1-11). These passages of Schuetze show the adjustment of the content of a document based on inlinks and outlinks.

It would have been obvious to a person for ordinary skill in the art at the time of the applicant's invention to modify the teachings of Chakrabarti with the teachings of Schuetze because Schuetze provides a system wherein users can adjust content of documents based on the complexity of the document and track individuals information access habits by way of the characteristics of the documents those users access (See col.5, lines 33-37)

The combination of Chakrabarti and Schuetze does not explicitly teach and assigning a content-based relevance rank to each candidate page based on a probability that a user will stay on a selected candidate page.

Candan teaches a method for estimating an association between the media object and the seed web page accessed by a user (See the abstract, and col.4, line 63 through col.5, line 6) including similarly the features, assigning a content-based relevance rank to each candidate page based on a probability that a user will stay on a selected candidate page (See col.16, lines 35-46).

It would have been obvious to a person for ordinary skill in the art at the time of the applicant's invention to modify the combination's teachings of Chakrabarti and Schuetze with the teachings of Candan because Candan provides a system wherein a pre-fetched object utilization can be captured by an object visualization probability and subjecting an end-user's stickiness meaning the time that the end-user spends viewing the page which clearly correspond to the time the user stay in the page.

As per claim 23, the combination of Chakrabarti, Schuetze and Candan, as modified, teaches the claimed invention limitations, wherein adjusting includes distributing, to the selected

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candidate page, the quantity and relevance of candidate pages that point to the selected candidate page based on a link structure of the candidate pages (See Chakrabarti's col.5, line 61 through col.6, line 25).

As per claim 24, the combination of Chakrabarti, Schuetze and Candan, as modified, teaches the claimed invention limitations, wherein the distributing includes determining a link value for a page link as a probability of following the page link based on a weighted (See Chakrabarti's col.7, lines 52-65) probability of leaving a page by the page link and a relevance of a page being pointed to by the page link (See Candan's col.16, lines 41-47). The time spent by the user for viewing the pages corresponds also to the same time he/she has to leave the pages.

Allowable Subject Matter

9. Claim 25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Other Prior Art Made of Record

10.	Horvitz	U. S. Pat. No. 6,085,226,
	Logan et al.	U. S. Pat. No. 5761,683,
	Weinberg et al.	U. S. Pat. No. 6,237,006, and
	Kaplan et al.	U. S. Pat. No. 5,446,891.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

12. **Any response to this action should be mail to:**

Commissioner of Patent and Trademarks
Washington, D.C. 20231

Or faxed to:

(703) 746-7239 (for formal communication intended for entry)

Or:

(703) 746-7240 (for informal of draft communications, please label

“PROPOSED” or “DRAFT”)

Hand - delivered responses should be brought to Crystal Park II, 2021 Crystal Drive, Arlington, VA, Fourth Floor Lobby (Receptionist Telephone No. (703) 305-3900).

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jacques Veillard whose telephone number is (703) 305-7094. The examiner can normally be reached Monday through Friday from 9:30 AM to 4: 30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dov Popovici, can be reached on (703) 305-3830. The fax phone number for this group is (703) 308-5403.

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Jacques Veillard

Jacques Veillard
Patent Examiner TC 2100

September 24, 2003

Charles Rones

**CHARLES RONES
PRIMARY EXAMINER**